REMARKS

Claims 6, 7, 10, 11, 15, 17, 18, and 27 were presented for examination and were pending in this application. In an Office Action dated May 25, 2010, claims 6, 7, 10, 11, 15, 17, 18, and 27 were rejected.

Claims 6, 7, 10, 11, 15, 17, 18, and 27 are hereby amended to more specifically recite aspects.

Based on the above Amendment and the following Remarks, Applicants respectfully request reconsideration and withdrawal of outstanding rejections.

Claims Are Not Obvious Over Cited References

In the Office Action, claims 6, 7, 10, 11, 15, 17, and 18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0075965 ("Claesson") in view of U.S. Patent No. 5,805,715 ("Rhee").[1] This rejection is overcome in view of the amendments.

Independent claim 6, as amended, recites the feature of "processing the full bandwidth component signal without sound-level decompression . . . processing the bass component signal with sound-level decompression . . .processing the midrange component signal with sound-level decompression . . . processing the treble component signal with sound-level decompression . . . ."

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[1] Paragraph 3 of the Office Action states that claims 6, 7, 10, 11, 15, 17 and 18 are rejected as being unpatentable over only Claesson. However, in pages 3-5 of the Office Action related to rejection of these claims, Rhee is specifically mentioned to reject these claims. Hence, the statement in the Office Action that claims 6, 7, 10, 11, 15, 17 and 18 are rejected based on only Claesson appears to be a typographical error. Applicants assume herein that claims 6, 7, 10, 11, 15, 17 and 18 have been rejected over Claesson in view of Rhee.

Per claim 6, a full bandwidth pathway processes a full bandwidth component signal without sound-level decompression. A bass pathway, a midrange pathway and a treble pathway process a bass component signal, a midrange component signal and a treble component signal, respectively, with sound-level decompression. The sound-level decompression provides widening of the dynamic range of the audio signal to help correct for compression of the audio signal. See, for example, page 21, lines 22-25 of the specification.

Claesson fails to disclose this feature. Claesson at best discloses dividing an audio signal into multiple bands and processing them individually. See Claesson, ¶¶ [0066] and [0075]; and FIGS. 10a and 10b. Each band in Claesson includes AGC (automatic gain control) and NATL (negative attack time limiter). However, none of these components perform sound-level decompression where the dynamic range of the audio signal is increased. Moreover, nowhere in Claesson does it disclose that some of the component signals are sound-level decompressed while at least one other component signal is not sound-level decompressed. Therefore, Claesson fails to disclose the feature of "processing the full bandwidth component signal without sound-level decompression . . . processing the bass component signal with sound-level decompression . . .processing the midrange component signal with sound-level decompression . . . processing the treble component signal with sound-level decompression," as recited in claim 6.

Nor does Rhee disclose this feature. Rhee is related to compensating distortion of an acoustic signal to match an auditory characteristic of a human and reduce the number of filter taps. See Rhee, 2:11-19. Rhee at best discloses a linear distortion compensation apparatus including filters 30, 40, 50 for performing distortion compensation. However, nowhere in

Rhee does it disclose anything about performing sound-level decompression or performing sound-level decompression in some component signals but not others.

Therefore, claim 6, as amended, is patentably distinguishable over Claesson and Rhee for reciting the feature of "processing the full bandwidth component signal without sound-level decompression . . . processing the bass component signal with sound-level decompression . . . processing the midrange component signal with sound-level decompression . . . processing the treble component signal with sound-level decompression . . . ."

Claims 7, 10 and 11 depend from claim 6; and therefore, claims 7, 10 and 11 are also patentably distinguishable over Claesson and Rhee.

Independent claim 15, as amended, similarly recites the feature of "producing a processed full bandwidth signal without sound-level decompression . . . producing a processed bass component signal with sound-level decompression . . . producing a processed midrange component signal with sound-level decompression . . . producing a processed treble component signal with sound-level compression . . . ." Therefore, claim 15 and its dependent claim 17 are also patentably distinguishable over Claesson and Rhee for similar reasons as set forth above for claim 6.

Independent claim 18, as amended, similarly recites the feature of "processing the full bandwidth component signal without sound-level decompression . . . processing the bass component signal with sound-level decompression . . . processing the midrange component signal with sound-level decompression, and . . . processing the treble component signal with sound-level decompression . . . ." Therefore, claim 18 is also patentably distinguishable over Claesson and Rhee for similar reasons as set forth above for claim 6.

In the Office Action, claims 27 and 32 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Claesson in view of Rhee in further view of U.S. Patent No. 4,396,806 ("Anderson"). This rejection is overcome in view of the amendments.

Independent claim 27, as amended, recites the feature of "a first expander for performing sound-level decompression . . . a second expander for performing sound-level decompression . . . a third expander for performing sound-level decompression . . . ." As set forth above, Claesson and Anderson fail to disclose anything about sound-level decompression. Nor does Anderson disclose this feature. Anderson relates to a programmable hearing aid amplifier including multiple band preamplifiers. See Anders, 1:53-58. The preamplifier includes voltage-controlled input amplifier, a voltage-controlled compressor and a voltage-controlled output amplifier for shaping the characteristics of a channel. See Anders, 1:61-66. However, Anderson fails to disclose any components for performing sound-level decompression.

Therefore, claims 27 and its dependent claim 32 are also patentably distinguishable over Claesson and Rhee for similar reasons as set forth above for claim 6.

Based on the above Amendment and the following Remarks, Applicants respectfully submit that claims 6, 7, 10, 11, 15, 17, 18, and 27 are patentably distinguishable over the cited references, both alone and in combination. Therefore, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a).

Conclusion

Favorable action is solicited.

Respectfully submitted,

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